

CLAIMS

1. A process for production of clavulanic acid comprising fermentation of a clavulanic acid producing species of *Streptomyces* in a fermentation broth containing assimilable sources of carbon and nitrogen, wherein the starting concentration of assimilable nitrogen is greater than 5% and, wherein the concentration of assimilable phosphorus in the fermentation broth is less than 0.15% w/v during the growth phase the phosphorus concentration being allowed to decrease after cessation of the growth phase.

2. A process as claimed in claim 1, wherein the phosphorus concentration is allowed to decrease after a fermentation time of 40 hours.

3. A process as claimed in any preceding claim, wherein the phosphorus concentration up to a fermentation time of 40 hours is 0.0015 to 0.15% w/v.

4. A process as claimed in claim 3, wherein the said phosphorus concentration is 0.002 to 0.05% w/v.

5. A process as claimed in any preceding claim, wherein no assimilable phosphorus is added after a fermentation time of 40 hours.

6. A process as claimed in any preceding claim, wherein the source of assimilable nitrogen does not include ammonia.

7. A process as claimed in claim 6, wherein the sole source of assimilable nitrogen is not ammonia.

8. A process as claimed in any preceding claim, wherein the source of assimilable nitrogen is flour.

9. A process as claimed in any preceding claim,

wherein the assimilable nitrogen source is ammonium sulphate.

10. A process as claimed in any preceding claim, wherein the concentration of the assimilable nitrogen source is 0.5 to 15% w/v.

11. A process as claimed in any preceding claim, wherein the source of assimilable phosphorus is sodium or potassium phosphate, sodium or potassium dihydrogen phosphate or disodium or dipotassium hydrogen phosphate or a mixture thereof.

12. A process as claimed in any preceding claim, wherein the microorganism is *Streptomyces clavuligerus*, *Streptomyces jumonjinensis*, *Streptomyces katsurahamanus* or *Streptomyces* sp. P6621.

13. A process as claimed in any preceding claim, wherein the process is fed batch or continuous with intermittent or continuous addition of an assimilable source of phosphorus.

14. A process as claimed in any preceding claim, wherein the volume of the fermentation broth is greater than 10^4 l.

15. A process as claimed in claim 14, wherein the volume is 5×10^4 l.

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